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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/063,550	05/02/2002	Eddy B. Boskamp	GEMS8081.091	9994

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EXAMINER

JUNG, WILLIAM C

ART UNIT	PAPER NUMBER
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3737

DATE MAILED: 02/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/063,550

Applicant(s)

BOSKAMP, EDDY B.

Examiner

William Jung

Art Unit

3737

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on March 15, 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 10-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 10-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed March 15, 2004 have been fully considered but they are not persuasive.

Regarding claims 1 and 28: Leussler clearly anticipates all features in claim 1 where an MRI imaging system includes RF coil with wireless transmission of the modulated signal via oscillator 200 where the transmitted signals are modulated (col. 5, lines 27-52).

Regarding claim 7: In contrary to argument on remark page 7, the claim 7 does not disclose any element being configured to retro fit to a MRI system. Therefore, the rejection stands from the previous office action.

Regarding claim 8: Leussler clearly anticipates use of high frequency transmission of RF signal to the signal processor over short range (col. 6, lines 22-51). However, Leussler does not specifically disclose the frequency of the transmission. In Schotz et al, the prior art teaches that in wireless transmission over short range, the frequency of the transmission is at least 900 MHz, the applicant's range of UHF. Therefore, Schotz et al's teaching clearly shows state of art where the improvement of wireless transmission of RF signal in Leussler is obvious to one skill in the art.

Regarding claim 17: The power supply limitation where the applicant's amendment includes battery-less means is not supported by the specification. The specification does not support that the RF signal transmission without battery. In fact, paragraph [0022] of the specification clearly states that the RF coil is powered by rechargeable battery.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 17-22 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. As stated above, the amended limitation of battery-less power is not supported by the specification.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 17-22 are rejected under 35 U.S.C. 101 because the claimed invention is not supported by either a lack of asserted utility or a well established utility.

The specification does not support that the RF signal transmission without battery. In contrary the applicant's specification explicitly disclose the power supply requirement via rechargeable battery as shown in figures and 2 and paragraph [0022].

Claims 17-22 are also rejected under 35 U.S.C. 112, first paragraph. Specifically, since the claimed invention is not supported by either a lack of asserted utility or a well established utility for the reasons set forth above, one skilled in the art clearly would not know how to use the claimed invention.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 2, 4, 6, 7, 17, 18, 20-23, and 25-28 are rejected under 35 U.S.C. 102(b) as being anticipated by *Leussler* (US 5,245,288).

Leussler anticipates all claimed features in claims 1, 2, 4, 6, 7, 17, 18, 20-23, and 25-28. Leussler teaches a wireless RF magnetic resonance transmission apparatus (col. 1, lines 46-52) comprising a transmitter and receiver (as in claims 1, 7, and 26) (col. 1, lines 45-52), a modulator (as in claim 2) (col. 5, lines 58-68; col. 6, lines 1-5), and a receiver located remotely from MRI apparatus (as in claim 4 and 25) (col. 2, lines 3-35) wherein the transmitter transfers signals out of a bore of the magnet (as in claims 6 and 27) (col. 3, lines 44-55). Leussler fails to teach acquiring power from a B field (as in claim 17) however, it is inherent in the art of MRI that the B field understood as homogenous mean magnetic field would be generated when nuclei in the subject is excited by a gradient field.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 3737

9. Claims 3, 8, 10, 11-16, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Leussler* as applied to claim 1 above, and further in view of *Schotz* (US 5.581.617).

Leussler meets all the claims, including a rechargeable battery (as in claim 21) (col. 2, lines 5-10) except that it fails to teach operating at the wireless device at UHF frequency, and more specifically at 900 MHz. Schotz teaches a system for transmission of signals using high frequency carrier, comprising transmission of signals at 900 MHz (col. 2, lines 40-50). It would have been obvious to one of ordinary skill in the art at the time the invention was made apply Schotz's teaching of UHF transmission over short range distance to Leussler's device to allow for proper and efficient transmission while maintaining a high SNR.

10. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Leussler* as applied to claim 17 above, and further in view of *Goto* (US 6,218,834).

Leussler meets all claimed features except that it fails to teach rectifier. Goto teaches a MR signal processing system comprising a rectifier (col. 1, lines 58-62). It would have been obvious to one having an ordinary skill in the art at the time the invention was made to apply Goto's teaching to improve the correcting signals in Leussler's device.

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

Art Unit: 3737

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to William Jung, Ph.D. whose telephone number is 571-272-4739. The examiner can normally be reached on Mon-Fri 8:30 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on 571-272-4956. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

XJ

February 16, 2005


BRIAN L. CASLER
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